

Core Analyzer Model 2160

Instrument and Measurement Fixtures

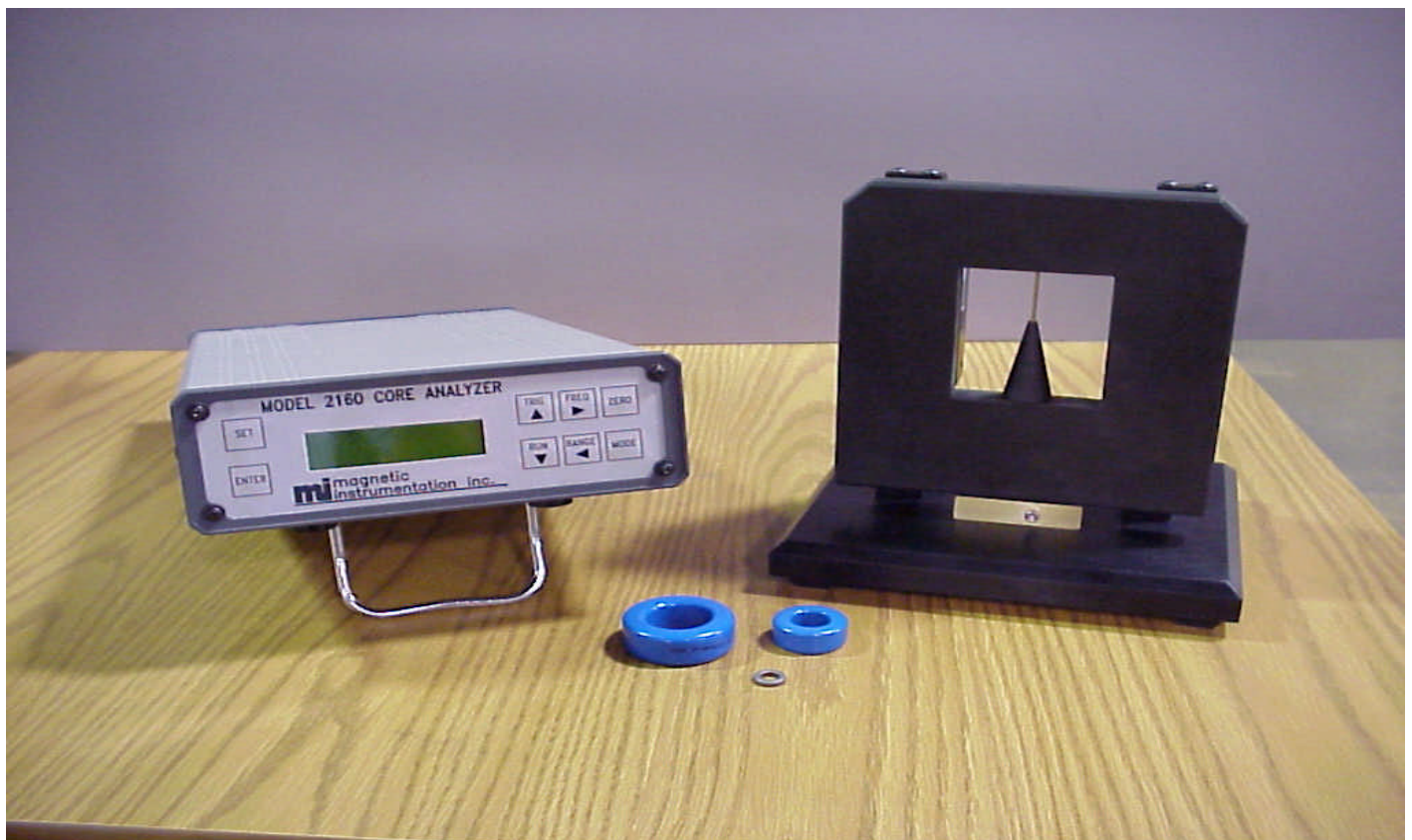
Description

The Model 2160 is a compact, precision, microprocessor controlled instrument capable of measuring the inductance of toroid cores prior to winding. Twelve measurement ranges allow the user to configure the meter for maximum resolution and accuracy from 2mH to 10H @ 1000 turns.

The 2160 is provided with Data Acquisition Software to facilitate collection and storage of inductance data. The application consists of a multiple document interface that allows several data files to be open for data collection or editing. Inductance data collected is stored in an easy to use CSV (comma separated variables) format which can be readily imported into most spreadsheet and database applications for custom report generation or analysis.

Features

- High Accuracy and High Resolution (15 bit)
- 12 Measurement Ranges (2mH to 10 Henries @ 1000 Turns)
- User-defined sampling period - 400ms to 2800ms
- Variable Excitation Frequency - 1kHz to 15kHz
- 3 modes of Operation
Normal, Dual Limit and Relative
- 32 Character Backlit Display With Adjustable View Angle
- Built-in RS-232 Interface - Optional IEEE-488
- External Trigger
- Triggered or Continuous Measurement Mode
- Store/Recall 8 Meter Configurations
- A Wide Range of Measurement Fixtures are available for Absolute or Relative Measurements

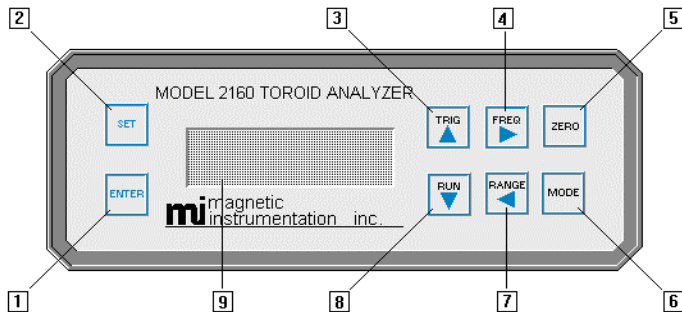


Magnetic Instrumentation, Inc.

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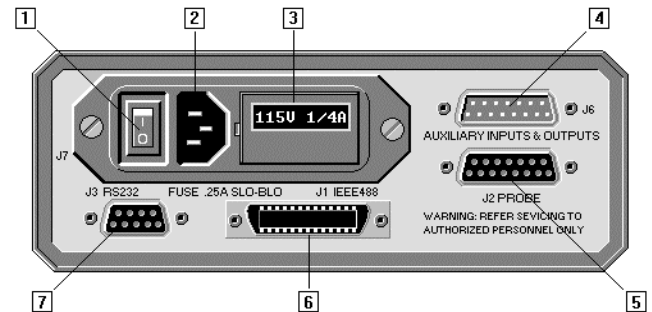
Front Panel Controls

- 1 ENTER Key
- 2 SET Key
- 3 TRIG (Up) Key
- 4 FREQ (Right) key
- 5 ZERO Key
- 6 MODE Key
- 7 RANGE (Left) key
- 8 RUN (Down) Key
- 9 Display



Rear Panel Accessories/Connectors

- 1 ON/OFF SWITCH
- 2 POWER RECEPTACLE
- 3 FUSE HOLDER
- 4 AUXILIARY CONNECTOR
- 5 FIXTURE CONNECTOR
- 6 GPIB CONNECTOR
- 7 RS-232 CONNECTOR



Specifications

Accuracy Specifications:

Function	Range	Typical (% of range)	Maximum (% of range)	Conditions
Inductance	2mH – 10 H @n = 1000	0.30%	0.70%	10 kHz lex
Repro- ducibility	2mH – 10 H @n = 1000	0.10%	0.30%	10 kHz lex
Frequency	1 kHz – 15 kHz	0.03%	0.08%	~
lex	100 mA	~	~	~

General Specifications:

Property	Specification
Size	12.6" L x 6.9" W x 2.9" H
Weight	7.5 lbs.
Power	115 or 220 VAC 50/60 Hz
Fuse	0.25A 250V type 3AG

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Core Analyzer Model 2160

Data Acquisition Software

Description

The Model 2160 is provided with Data Acquisition Software to facilitate collection and storage of inductance data. The application consists of a multiple document interface that allows several data files to be open for data collection or editing. The application allows the Model 2160 Core Analyzer to be controlled from the application using an RS-232 Interface.

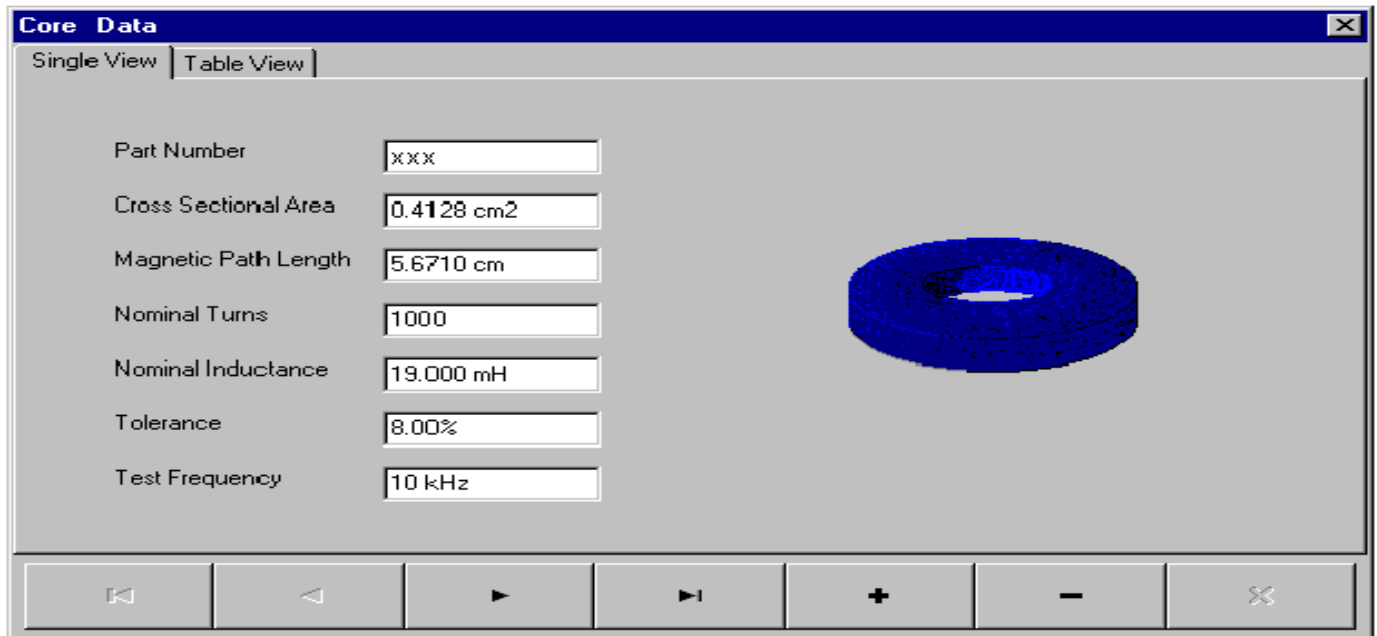
Parameters for each type of core are maintained by the application in Dbase IV format. Inductance data collected is stored in an easy to use CSV (comma separated variables) format which can be readily imported into most spreadsheet and database applications for custom report generation or analysis.

Features

- RS-232 Interface to Model 2160
- Database for Core Parameters (Dbase IV)
- Inductance Storage Format is CSV (Comma Separated Variables)
- All Measurements Are Time and Date Stamped
- Simultaneous Editing of Multiple Data Files
- Easy Importing of Data Into Most Spreadsheet or Database Applications
- User Interface Similar to Most Windows™ Applications.
- Easy Editing of Core Parameters
- Select Single Core or Table Format View of Parameters.

The Core Data Dialog Screen allows the user to add, delete, or modify parameters for a particular toroid Core. Once these changes are made, the data is stored in a database that is maintained by the application. The data may be viewed in two different ways: 1.) The Single View shows the parameters for

a single part number only, 2.) The Table View shows the parameters for several part numbers in a spreadsheet format. The Navigation bar at the bottom of the dialog allows the user to navigate through the various part numbers.



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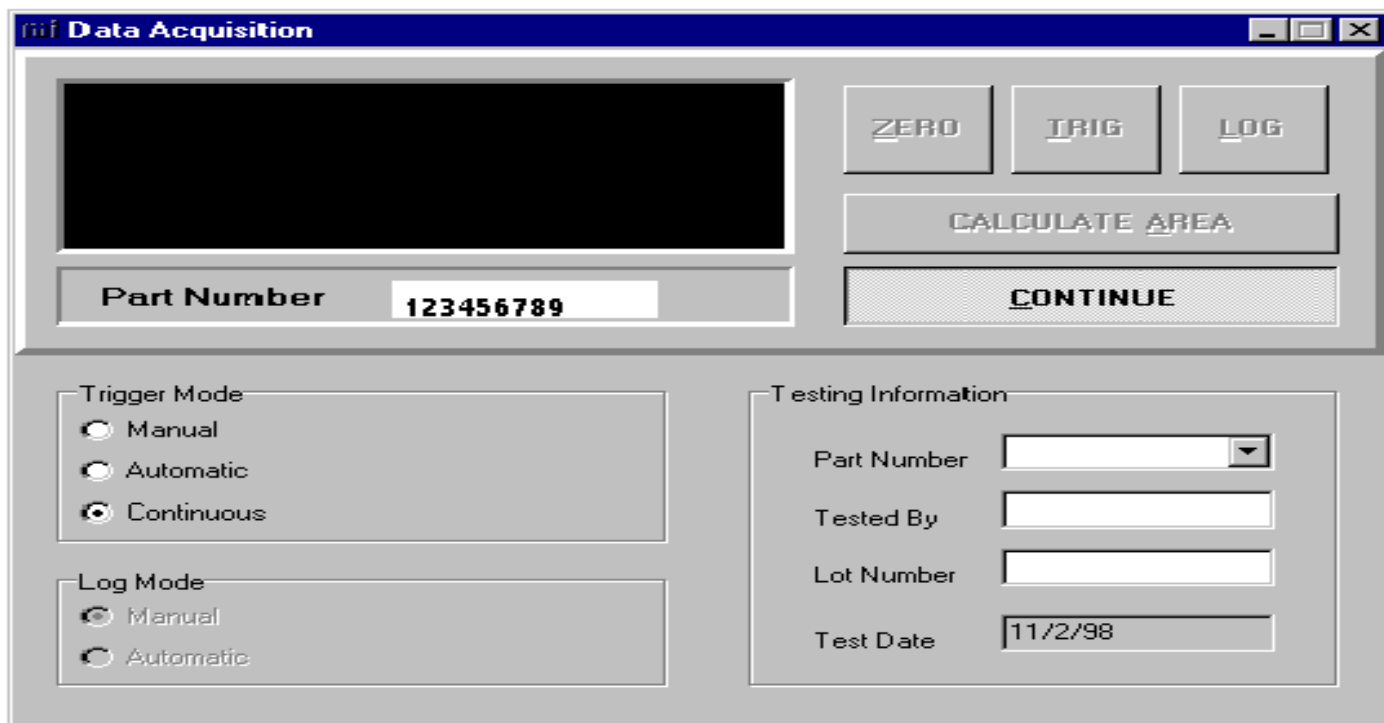
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Data Acquisition Software

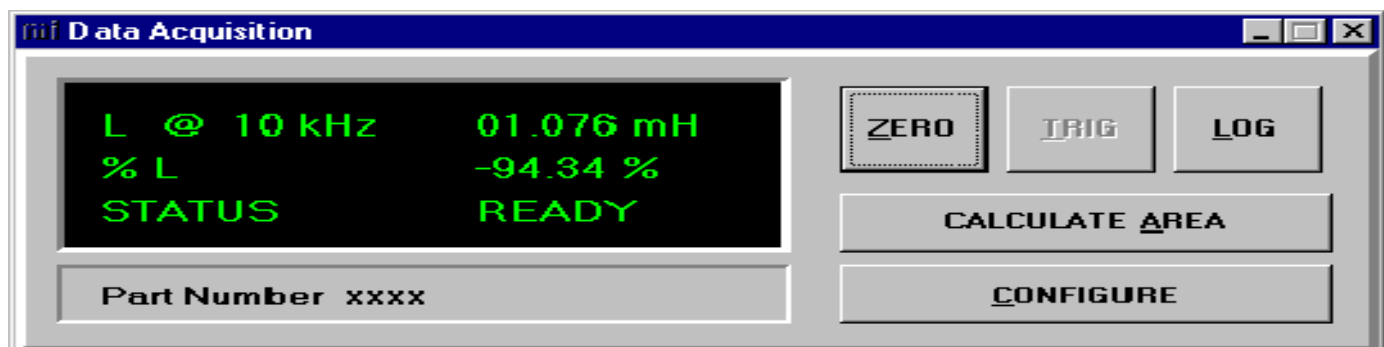
The **Data Acquisition Panel** allows the user to configure the Model 2160 Core Analyzer, view results and collect data. The data acquisition panel has two states, configuration and measurement. In the configuration state (shown below) the user can edit the various options and settings for the Model

2160 and specify part number, lot number, and fixture ID. While the configuration state is set, no measurements are taken and the Model 2160 is placed in an idle state. Once the Continue button is pressed, the Model 2160 settings will be updated according to any changes made.



The Data Acquisition Panel - Measurement State Screen displays measurement information, status and error messages. The ZERO button is used to initiate a Zero measurement cycle. The TRIG button initiates a measurement

cycle while the LOG button is used to record the last measurement to the active data file. The CONFIGURE button places the Model 2160 in an idle state and sets the data acquisition form to the configuration state.



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